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THE CCTC QUICK-REACTING GENERAL WAR GAMING SYSTEM (QUICK). USER--ETC(U)
JUN 79

UNCLASSIFIED CCTC-CSM-UM-9-77-V2-CH-2 NL

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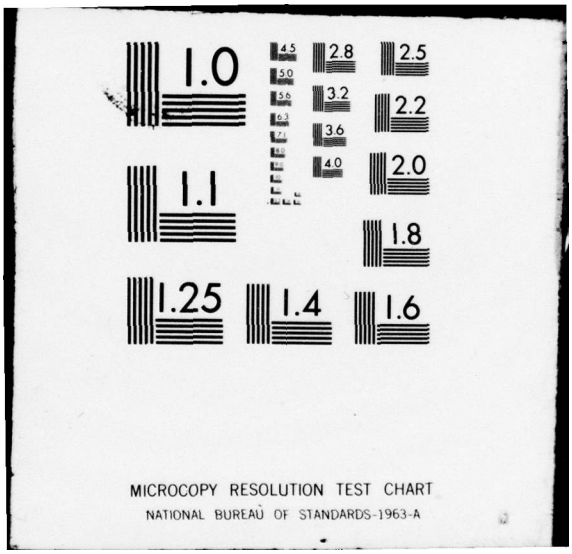
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TO: RECIPIENTS

SUBJECT: Change 2 to Users Manual CSM UM 9-77, Volume II, Weapon/Target Identification Subsystem

1. Insert the enclosed change pages and destroy the replaced pages according to applicable security regulations.

2. A list of Effective Pages to verify the accuracy of this manual is enclosed. This list should be inserted before the title page.

3. When this change has been posted, make an entry in the Record of Changes.

FOR THE DIRECTOR

J. DOUGLAS POTTER
Assistant to the Director
for Administration

33 Enclosures
Change 2 pages

(6) The CCTC Quick-Reacting General War Gaming System (QUICK). Users Manual. Volume II. Weapon/Target Identification Subsystem. Change 2.

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EFFECTIVE PAGES - MAY 1979

This list is used to verify the accuracy of CSM UM 9-77 Volume II after change 2 pages have been inserted. Original pages are indicated by the letter O, change 1 pages by the numeral 1, and change 2 pages by the numeral 2.

Page No.	Change No.	Page No.	Change No.
Title Page	0	50	0
ii	2	51	1
iii	1	52-54	0
iv	2		
v	1		
vi	0		
1-2	0		
3	1		
4	2		
5-8	1		
9	2		
9.1	2		
9.2	1		
10-12	0		
13	2		
14-17	0		
18	1		
19-20	2		
21-24	0		
25-28	1		
29	0		
30	2		
31-32	0		
33-36	2		
36.1-36.2	2		
37	2		
38-40	0		
41	0		
42	2		
43	0		
44-45	2		
45.1-45.2	2		
46	0		
47	1		
48	0		
49	2		

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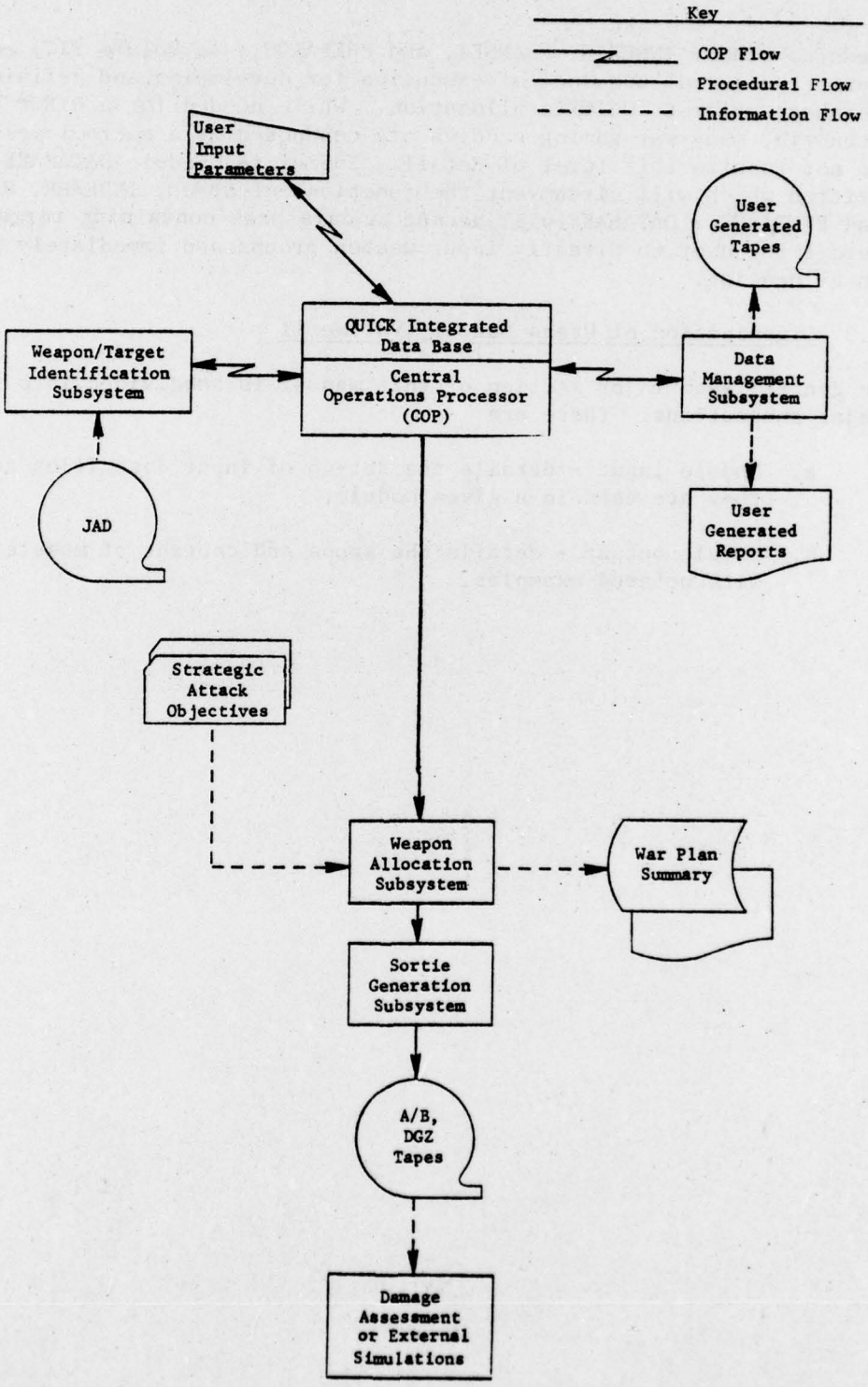

Figure 2. Procedure and Information Flow in QUICK/HIS 6000

Modules DBMOD, INDEXER, PLANSET, and PREPALOC (see Volume III) constitutes the normal sequence of execution for developing and refining the database prior to QUICK's allocation. While needed for a RISOP type scenerio, many war gaming studies are conducted at a macro level which do not require this level of detail. Therefore, module DATAMAKE was written which will circumvent the functions of DBMOD, INDEXER, PLANSET, and PREPALOC. DATAMAKE will accept a data base containing targets and permit the user to directly input weapon groups and immediately perform an allocation.

1.3 Organization of Users Manual, Volume II

In general each major section of this manual is subdivided into two major subsections. These are:

a. Module input - details the set-up of input data files and how they are used in a given module.

b. Module output - details the scope and content of module output, with notated examples.

to be developed attributes CLASS, TASK, TYPE, IREG are frequently employed in describing the nature of a target. Within the WHERE clause for this verb attributes ACLASS, ASNTASK, ATYPE, and REGION respectively contains the entries for the game related attributes. That is the latter mentioned attributes must be used for defining the target selection. Upon selection, the correct attributes will be stored.

If the input JAD file is not on unit 20, the UNIT adverb must be used.

If the UNIT adverb has a value greater than 100 the Bypass option is to be used and the actual input unit number is 100 less than the value.

The user has the option of running SELECT on a partially built integrated data base. Hence, the capability of either replacing duplicate records or ignoring them is useful. A duplicate target is anything with identical values for WACNO and BENO. In order to replace existing targets the phrase REPLACING DUPLICATES is used. OMITTING DUPLICATES causes the new target to be ignored. Care should be used in exercising these options since with a data base of any size at all, the run time becomes excessive.

The ORDER clause allows the user to specify the arrangement that the classes will be added to the integrated data base. A command such as

SELECT ORDER MISSIL BOMBER TANKER 'U/I'

would cause targets to be added to the data base accordingly.

If the Bypass option is being exercised, the last two items in the ORDER clause must be the SIDE the targets are on and the type of input file (BTB, BTL or DBASSES).

The SETTING clause is used to set the value of TARDEF to allow for automatic assignment of values for TARDEFHI and TARDEFLO.

2.2.3 The ASTERISK Verb. This verb removes targets from the integrated data base and flags all target records on an output JAD format file. If identical target records reside both within the integrated data base and an input JAD file, an asterisk is placed on that record within the output JAD file. There are two adverbs associated with the ASTRISK verb and the general form is:

ASTERISK [ONPRINTS

KEEPING lowdesig [- highdesig]

[, lowdesig [- highdesig . . .]]

ONPRINTS, optional, directs the printing of the output JAD format file.

The KEEPING adverb consists of a list of DESIG ranges that are to be kept in the data base and flagged on the output file. For example:

will cause that target with DESIG FF055 to be kept but DESIG AC100 to be dropped. The DESIG ranges must be defined in increasing sort order. The input JAD file must also be sorted on DESIG. Module PERFORM defines file unit numbers for the input and output JAD.

2.3 Output

2.3.1 Standard. The only standard output JLM produces is the completion message.

2.3.2 Non-Standard. The ASSIGN verb can generate two types of reports: (1) a list of legal country codes (figure 3) and (2) the Assignment table (figure 4). The only output from the SELECT and ASTERISK verbs is a JAD format file (figure 5). The third column presents those items used by QUICK; the fourth column presents those items created by JLM if the Bypass option is not exercised.

2.3.3 Error Messages. Any error messages that may be encountered within the JLM are explained in figure 6.

```
LEGAL COUNTRY CODES FOR EACH REGION (1)

SIDE RED (2)

REGION  1 (3)
    BD CU MO MX UR (4)

REGION  2
    AL BG BU CZ EG GC HG HU IT PL PO RM RO YG

REGION  3
    CH KN MG NK NV VN

SIDE BLUE

REGION  1
    AK CA CL HW US

REGION  2
    FR IR SP TK UK WG

REGION  3
    GM JA PK SK

DESIGS AND MAX VALUE FOR EACH REGION
PF    0 499 799
AD    0 499 799
AC    0 499 799
AB    0 499 799
(5)   (6)(7) (8)
```

HEADING	DESCRIPTION
(1)	Table name
(2)	Side country codes are on
(3)	The region for the country codes
(4)	List of valid country codes
(5)	Alpha portions of this DESIG
(6)(7)(8)	The largest numeric portion for region 1, 2, and 3 (0 means none)

Figure 3. Legal Country Codes For Each Region

COLS.	ITEM	USED	CREATED BY JLM
205	Scaling Factor		
206-208	Radius	*RADIUS	
209-212	Percent Capacity		
213-224	Dimensions		
225-236	Fiscal Year Projections		
237	File ID Code		
238	Phase Code		
239-245	Security Class		
246-247	Remark		
248-253	Owner UIC		
254-255	Serv Spcl Code		
256-258	READY Code		
259-267	Blank		
268-183	Not Used		
284-286	SIOP Table Number		
289-293	DESIG		DESIG
294	Flag if in the Data Base		* or blank
295-300	Type		TYPE
301-303	Not Used		
304-306	Subset or Class Index		*
307-318	Not Used		
319	QUICK Region		IREG
320	SAGA Region		*
321-324	Not Used		
325-330	SAGA Flag		
331-336	BLANK		

Figure 5. (Part 2 of 2)

PRECEDING PAGE NOT FILMED
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1	MODULE JLM CALL WITH ILLEGAL VERB, NUMBER=(verb number) An error exists outside of JLM, consult a maintenance programmer.
2	TOO MANY UNIQUE VALUES FOR ATTRIBUTE XSIDE DISCOVERED (side) IGNORED More than four different sides exist in the data base, call a maintenance programmer.
3	FINDCLAS UNABLE TO FIND ACLASS LIST Data base error, call maintenance programmer.
4	ASSIGN OF JLM CALLED WITH ILLEGAL ADVERB, NUMBER=(adverb-number) An error exists outside of JLM - call maintenance programmer.
5	ASSIGN OF JLM CALLED WITH NO ADVERBS Check input, ASSIGN must have adverbs.
6	WARNING-COUNTRY CODE (country-code) MOVED FROM REGION (region) TO REGION (region) This error occurs when the country-code in the Players clause exists already but in a different region.
7	SIDE ANTICIPATED BUT NOT FOUND (input 1 input 2) The first word following PLAYERS is not an alphabetic.
8	SLASH NUMBER (1 or 2) MISSING AFTER SIDE A pair of slashes must follow the side. Check for missing operators.
9	// NOT FOLLOWED BY REGION A numeric value must follow the double slash.
10	REGION (region) ON SIDE (side) NOT FOLLOWED BY / The region must be preceded by // and followed by /.

Figure 6. JLM Error Message (Page 1 of 5)

SECTION 3. MODULE DBMOD

The main function of module DBMOD is to alter the data base to adapt it to a specific scenario for which the plan is being developed. This includes the setting of the attacking and defending sides. DBMOD determines the attributes for NOINCO (number in commission) and NOALER (number on alert) for bombers and missiles. The user also has the option of scaling the value (VAL) given to an U/I target based on the values for population (POP) and IGIW. The option also exists to calculate local bomber defenses (TARDEFHI and TARDEFLO).

In order to operate correctly DBMOD needs to have the following attributes defined. For the attacking side ADBLI, NADBLI, or ADBLR and NADBLR and NPRSQ1, NPRSQ2, NPRSQ3. For the defending side the values of POP, IGIW, must also be set.

3.1 Input

Inputs specify the attacking and defending sides, plus the scenario to which the game is to be tailored and, optionally, scaling factors for U/I value calculations and the determination of local bomber defenses.

The general command necessary for DBMOD execution is the verb MODIFY followed by a SETTING clause which is used to set attributes necessary to run DBMOD and an optional UICLASSES clause. The general form is:

```
MODIFY   SETTING   SCENARIO   {EQUAL}   {SIERRA}
                              {  =  }   {INDIA  }
                              {     }   {ROMEO  }

                   ASIDE      {EQUAL}   side
                              {  =  }

                   DSIDE      {EQUAL}   side
                              {  =  }

         [TARDEF   {EQUAL}   YES   ]
                   {  =  }

         [PCTIW    {EQUAL}   value ]
                   {  =  }

         [PFIW     {EQUAL}   value ]
                   {  =  }

         [PCTPOP   {EQUAL}   value ]
                   {  =  }

         [PFPOP    {EQUAL}   value ]
                   {  =  }

         [UICLASSES, value, value . . . ]
```

SCENARIO input is required, as well as the setting of the attacking side (ASIDE) and defending side (DSIDE). All other phrases are optional. TARDEF phrase is used to automatically set the variables TARDEFHI and TARDEFLO as retained within the data base. Finally, scaling factors may be input used for setting values of U/I targets based on the values for POP and IGIW. In the absence of input scaling factors, default values are: PCTIW = 3.06, PFIW = .81, PCTPOP = 0, and PFPOP = 0.

As a default condition DBMOD will calculate value points for each target that belongs to CLASS=IGIW or U/I. If the user desires other target class to be treated similarly, each desired class name is supplied within the UICLASSES clause as given within the general command.

3.2 Output

The following prints are produced from DBMOD.

The Target Value Summary reflects the count and cumulative value of the targets by SIDE, CLASS, and TYPE (figure 7).

The Target Count by Region Table (figure 8) gives a target count by SIDE, REGION, and the alphabetic portion of the DESIG.

The Target Deleted by Region Table (figure 9) gives a count of targets deleted by SIDE, REGION, and the alphabetic portion of the DESIG.

The error messages detailed in figure 10 will be printed if problems arise in processing the data base.

ICOMPLEX	INDEXNO	TGTNAME	TASK	DESIG	LAT	LONG	VALUE
1	2880	LUNGCH		AB804	24.0100	242.3600	11.0000
① 1	2312	LUNGCH		AB819	24.0100	242.3600	3.0000
2	2881	SHANGH		AB805	31.3800	238.4700	11.0000
2	2316	SHANGH		AB823	31.3800	238.4700	3.0000
3	2307	DAIREN		AB814	38.9700	238.5400	3.0000
3	2878	DAIREN		AB802	38.9700	238.5400	11.0000
4	2234	PYONGY		AB834	39.0100	234.2100	3.0000
4	2364	PYONGY		AB810	39.0000	234.2000	3.0000
5	2233	PEKING		AB833	39.9200	243.5900	3.0000
5	2363	PEKING		AB809	39.9000	243.6000	3.0000
6	2882	TA-PAO		AB806	40.5700	235.6900	11.0000
6	2317	TA-PAO		AB824	40.5700	235.6900	3.0000

② 40 COMPLEX TARGETS

③ 84 ELEMENTS OF COMPLEXES

HEADING	DESCRIPTION
①	Typical data for each complex target element
②	Total number of complexes formed
③	Total number of elements within complexes

Figure 13. Target Complex Summary

1 MODULE INDEXER CALLED WITH VERB EQUAL TO (I6)

INDEXER was called with the wrong verb, check inputs.

2 MODULE INDEXER cannot recognize adverb (I6)

INDEXER was called with an improper adverb, check inputs. The adverb will be ignored.

3 MODULE INDEXER ENCOUNTERED ERRONEOUS SECOND WITH ADVERB. THE FIRST WITH ADVERB WAS USED.

INDEXER was called and its command contained more than one WITH clause. The first entry is accepted; any following are ignored.

4 MODULE INDEXER ENCOUNTERED UNKNOWN INPUT ATTRIBUTE (I8)

INDEXER encountered an unknown input attribute while processing a WITH clause. The entire WITH clause is ignored and processing continues.

5 MODULE INDEXER ENCOUNTERED INPUT SIDE ERROR. SIDE IS (A6)

INDEXER received a SIDE value which was neither the attacking nor defending side. Processing continues using default values.

6 NO. OF DATA BASE VULNS EXCEED MAX. LAST VULN READ: (A6)

There are more than 255 unique vulnerabilities defined in the data base. Excess entries are ignored and processing continues.

7 MODULE INDEXER FAILED TO FIND TGTHD RECORD ON RCTYP CHAIN. PROGRAM ABORTED.

Targets cannot be located within data base. Consult maintenance programmer.

8 MODULE INDEXER FOUND MORE THAN MAX CLASSES ON SIDE (A6) CLASS (A6) IGNORED

More than 15 target classes were found for the side indicated. The last class found is ignored and processing continues. Consult a maintenance programmer.

9 MORE THAN (I8) TARGETS IN COMPLEX (I8)

More than 99 targets were found for the complex indicated. The program examines the excess target to see if it belongs in another complex. No action by user is necessary.

Figure 14. INDEXER Error Message (Part 1 of 2)

SECTION 5. MODULE PLANSET

Module PLANSET is logically executed after complexing and the assigning of index numbers. At this juncture within the QUICK system, the user selects weapon systems and targets. It is from this selection that the QUICK ALLOCATOR optionally makes assignments of weapons to targets. Necessary objectives of PLANSET, then include:

- The selection of target classes and the specification of relative target values of the selected class to other classes;
- The reordering, if user directed, of target elements within complexes;
- The selection of missile, bomber, and tanker systems;
- The forming of weapon groups based on the selected weapon systems according to existing algorithms;
- The definition for command and control reliability;
- The provision of standard prints of selected weapon system characteristics, weapon groups formed, and lists of target related data.

5.1 Inputs

The execution of PLANSET, as with all modules, has the verb followed by required adverbs. The verb and adverbs are:

- PLANSET - The verb that causes execution
- SETTING - The adverb which introduces a clause to set various parameters
- PRIORITY - The adverb which introduces a clause to set criteria for choosing representative targets of complexes
- ATTACKERS - The adverb which introduces a clause to select weapon system inventory
- DEFENDERS - The adverb which introduces a clause to select target classes.
- ONPRINTS - Suppresses various calculations.

The general form of PLANSETs command is:

PLANSET [SETTING [RANGEMOD {=/EQUAL} value]
[CCREL {=/EQUAL} [value AND value . . .]]
[RETARGET {=/EQUAL} YES]]
[PRIORITY {TASK/DESIG} (value, value . . .)]
ATTACKERS (value, value . . .)
DEFENDERS (DESIG , VALUE) {=/EQUAL}
(desig, value) [AND (desig, value) . . .]
[ONPRINTS value value value . . .]

Discussion of each clause follows.

5.1.1 SETTING Clause. The SETTING adverb is followed by data required to define related module parameters. This clause sets the following:

- The RANGEMOD phrase is used to determine how far away a weapon site can be from a group centroid and still be included in the group. The value given to RANGEMOD is that fraction of the weapon's range that will be the maximum distance from the group centroid that a site can be and still be in the group. This phrase is optional. If it is not included the default value of .15 is used. A RANGEMOD of .2 would be entered as:

  RANGEMOD = .2

  Thus, if a weapon has a range of 1,000 miles, the maximum distance from the group geographic centroid and any base is 200 miles for alert weapons, 400 miles for nonalert weapons.

- The CCREL phrase is followed by values giving the Command and Control Reliability for each region. The order of CCREL placements determines the region to which it refers. For example, if the CCREL for Region 1 is .95 but for 2 and 3 it is .85, the input would be:

CCREL EQUAL .95 AND .85 AND .85

If for all regions, CCREL = 1, no inputs are required for this is the assumed default value; else entries must be input for each region.

- The RETARGET phrase is optional, and, if included, will allow the reprogramming of missiles.

RETARGET EQUAL YES

will cause the reprogramming option to be used.

An example of the entire SETTING clause would be:

```
SETTING RANGEMOD=.1 CCREL=.93 AND .22 AND .53
RETARGET = YES
```

5.1.2 PRIORITY Clause. The priority clause is used to set up criteria for choosing the representative target for a complex. The choice is based on the alpha portion of the target DESIG. The PRIORITY clause consists of the word DESIG and the ordered list of alpha-portion of desigs. DESIG priorities would be set with:

```
PRIORITY DESIG  (FA, AB, BC)
```

5.1.3 ATTACKERS Clause. The ATTACKERS clause consists of the adverb ATTACKERS and a list of the attacking weapons and tankers by TYPE. An example of an ATTACKERS clause would be:

```
ATTACKERS ('MM-III', 'B-52G', 'KC-135', 'F-III')
```

Weapon groups will be formulated in the same order as types are supplied within this clause.

5.1.4 DEFENDERS Clause. The DEFENDERS clause consists of the attributes (DESIG, VALUE) and a series of DESIGs of the exemplar target for each class of target being attacked paired with the new value of that exemplar target. If five target classes were to be included in the game and the targets with DESIGs of AB714, FA647, CA614, AL519, CT098 are the exemplar targets for these classes, the DEFENDERS clause might look like:

```
DEFENDERS(DESIGN,VALUE)EQUAL(AB714,1.3)AND(FA647,41.)AND
(CA614,.4)AND(AL519,6.8)AND(CT098,4.6)
```

5.1.5 ONPRINTS Clause. The appearance of this clause permits the user to control certain calculations standardly performed by PLANSET. Any series of up to six numbers (values from 1 to 6) separated by blank(s)

may appear after the ONPRINTS adverb. The presence of each number implies:

=1; Suppress the DESIG/Number Directory Print.
=2; Suppress the Target/Complex print.
=3; Suppress weapon group formulation
=4; Renormalize target value, nothing else. This feature permits the execution of PLANSET after PREPALOC has been executed.
=5; Suppress the FLAG/DESIG print.
=6; Form weapon groups, nothing else.

5.2 Output

5.2.1 Standard Output. All PLANSET prints are standard output. Hence, tables to follow illustrate all of the printouts in the same sequence in which they appear in the run output. A summary of each output follows.

- **Figure 15 -- User input information**
- **Figure 16 -- Selected target class value summaries**
- **Figure 17 -- Prints of all DESIGs that are common to attribute FLAG**
- **Figure 18 -- Target print of all elements selected by the user; print is in DESIG sort order**
- **Figure 19 -- Warhead table print**
- **Figure 20 -- Air-to-surface missile table print**
- **Figure 21 -- Payload table which is used to describe the numbers and types (attribute TYPE) that are transported by various delivery vehicles**
- **Figure 22 -- Selected weapon systems are printed**
- **Figure 23 -- Print of weapon groups**
- **Figure 24 -- For each weapon group formed by PLANSET, this print summarizes all launch bases included within the group**
- **Figure 25 -- Print of each target elements selected**
- **Figure 26 -- Print of target complex data**

5.2.2 PLANSET Error Messages. **The error messages for PLANSET are shown in figure 27.**

5.3 Module DATAMAKE

It is possible to override all of the functions of DBMOD, INDEXER, PLANSET, and PREPALOC with one module called DATAMAKE. This module will accept a database containing targets and permit the user to directly input weapon groups and immediately perform an allocation. The general command form is:

DATAMAKE SETTING (attributes)

PRIORITY DESIG (value, value . . .)

DEFENDERS (DESIG, VALUE) $\overset{=}{\text{EQUAL}}$

(desig, value) AND (desig, value) . . .

WITH (SIDE, YIELD) $\overset{=}{\text{EQUAL}}$ (value, value)

ONPRINTS VNOPTION

Clauses WITH, ONPRINTS, and VNOPTION are identically as used for verb INDEX and clauses PRIORITY and DEFENDERS are as described for verb PLANSET. The SETTING clause introduces a method of defining necessary global attributes (ASIDE, DSIDE, INITSTRK, CORMSL, or CORBOMB) plus each desired weapon group. Weapon bases are not defined; only the attributes needed for each individual group. The weapon group attributes are:

- o GTYPE - Name of the weapon system
- o PAYTBLNM - Payload table name
- o GNWPNS - Number of weapons
- o GLAT - Latitude
- o GLONG - Longitude
- o IREG - Region
- o IALERT - Alert status
- o GSBL - Probability of launch survival
- o PENPROB - If a bomber group, probability bomber will survive penetration
- o GREFCODE - Refuel code

Note that prior to these weapon group settings, the various payload, warhead, and weapon type systems much have been defined. Also be aware that no corridor geography is used. Standard prints are the same as outlined for PLANSET.

```
(2)     RANGEMOD  0.1500                    (1) PLANSET INPUT OPTIONS

(3)     CCREL INPUTS

    0.90000
    0.90000
    0.85000

(4) SELECTED EXEMPLAR TARGETS AND VALUE
            AB093          40.0000
            AB829           1.0000
            AB305           1.0000
            BC493           5.0000
            BD187         185.0000

(5) SELECTED WEAPON SYSTEMS
      B-52G    KC-135    MM-III    POL-A2

(6) DESIG PRIORITIES
    AB    AC    AD

(7) ONPRINTS   1   3
```

HEADING	DESCRIPTION
(1)	Module header
(2)	The input value for RANGEMOD, or the default value if none was input
(3)	Command and control reliability factor by region, as input or default value
(4)	A list of target DESIGs and value entries, in the order in which they were read
(5)	A list of the selected weapon systems in the order in which they were read
(6)	Complexing DESIG priorities as input
(7)	List of ONPRINTS options

Figure 15. PLANSET User Input Information

```
(1) EXEMPLAR TARGET FOR RED BOMBER CLASS IS ROGAN  DESIG NO. = AB093 VALUE =   0.

    EXEMPLAR TARGET FOR RED DEFCON CLASS IS HANOI  DESIG NO. = AB829 VALUE =   3.000

    EXEMPLAR TARGET FOR RED C/C    CLASS IS MOSCOW DESIG NO. = AB305 VALUE =   3.000

    EXEMPLAR TARGET FOR RED NUCSTO CLASS IS KARPIN DESIG NO. = BC493 VALUE =   5.000

    EXEMPLAR TARGET FOR RED U/I    CLASS IS MOSCOW DESIG NO. = BD187 VALUE = 388.000

(2) CLASSNAME CLASSVAL

    MISSILE  0.000
    BOMBER   0.000
    TANKER   0.000
    DEFCONTR 0.200
    INTCPTOR 0.000
    C/C      0.000
    NUCSTOR  0.000
    AIRFIELD 0.000
    NAVAL    0.000
    TROOPS   0.000
    COMMUN   0.000
    MISC     0.000
    U/I      0.248
    ABMDEF   0.000
    CLASS15  0.000
```

HEADING	DESCRIPTION
(1)	A repetition of the exemplar target information which was input. This print is issued each time an exemplar target is encountered on the data base.
(2)	A list of the normalized values for each class. A zero CLASSVAL appears here for any CLASSNAME for which no exemplar target value or a value of zero was input.

Figure 16. PLANSET Target Class Value Print

(1) WARHEAD TABLE

(2) INDEX	(3) YIELD	(4) PDUD	(5) FFRAC	(6) TYPE
1	4.0000	0.020000	0.700000	MK-18
2	2.0000	0.020000	0.700000	MK-7
3	1.0000	0.020000	0.700000	MK-5

HEADING	DESCRIPTION
(1)	Name of table
(2)	Sequential counter
(3)	Yield of weapon (megatons)
(4)	Probability of a dud weapon
(5)	Warhead fission fraction (i.e., fission yield/total yield)
(6)	TYPE of warhead; link with payload table

Figure 19. Warhead Table Print

(1) ASM TABLE		(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(2) INDEX	(3) RANGE	REL	CEP	CPASMZRO	SPEED	YIELD	PDUD	FFRAC	TYPEASM
1	200.0	0.099999	1.0000	1.000	600.0	1.5000	0.020000	0.700000	HNDDOG

HEADING	DESCRIPTION
(1)	Name of table
(2)	Sequential counter
(3)	Range of ASM (nautical miles)
(4)	Reliability of ASM
(5)	CEP of ASM at maximum range (nautical miles)
(6)	CEP at zero range
(7)	Speed of ASM in knots
(8)	Yield of ASM (megatons)
(9)	Probability of a dud ASM
(10)	ASM fission fraction (i.e., fission yield/total yield)
(11)	TYPE of ASM; links with payload table

Figure 20. ASM Table Print

(1)

PAYLOAD TABLE

(2) PAYTBLNM	(3) NBOMB1	(4) TYPE1	(5) NBOMB2	(6) TYPE2	(7) NASM	(8) TYPEASM	(9) NCM	(10) NDECOY	(11) NAREADEC	(12) MIRVWRHD	(13) PAYALT
B-47A	2	MK-5	0		0		0	0	0	0	HIVAL
B-47B	2	MK-7	0		0		0	0	0	0	HIVAL
B-47C	1	MK-18	0		0		1	0	0	0	HIVAL
B52GH1	4	MK-5	0		2	HNDDOG	1	0	0	0	HIGH
B52GH2	2	MK-18	0		2	HNDDOG	2	2	0	0	LOW
B-52E1	2	MK-7	0		0		1	2	0	0	HIVAL
B-52E2	2	MK-7	0		2	HNDDOG	1	0	0	0	HIVAL
B-58	3	MK-5	1	MK-18	0		1	0	0	0	HIVAL
MM-II	1	MK-17	0		0		0	2	2	3	
MM-IB	1	MK-5	0		0		0	0	0	0	
MM-IA	1	MK-5	0		0		0	0	0	0	
TITAN	1	MK-18	0		0		0	0	0	0	
POSEID	1	MK-20	0		0		0	0	0	10	
POL-A2	3	MK-12	0		0		0	0	0	0	
POL-A3	3	MK-12	0		0		0	0	0	0	

HEADING	DESCRIPTION
(1)	Name of table
(2)	Payload table number; links to a weapon system type
(3)	Number of first bomb type carried
(4)	Type of first warhead (warhead table)
(5)	Number of second bomb type carried
(6)	Type of second warhead (warhead table)
(7)	Number of ASMs
(8)	Type of ASM (ASM table)
(9)	Number of countermeasures carried by vehicle if vehicle is a bomber
(10)	Number of decoys on vehicle
(11)	Number of area decoys for ABM
(12)	Number of reentry vehicles, if MIRV
(13)	Attribute specifying weapon release altitude

Figure 21. Payload Table Print

(1) WEAPON TYPE CHARACTERISTICS

	(2) 1	2	3
(3) TYPE	MM-III	POL-A2	B-52G
(4) CLASS	MISSLE	MISSLE	BOMBER
ALRTDB	0.	0.	0.
ALTDLY	0.	0.	0.
CEP	0.60000	1.00000	0.50000
CMISS	0.00020	0.00035	0.
FUNCTI	ICBM	SLBM	LRA
IRECMO	0	0	1
IREP	4	4	0
LCHINT	1.000	1.000	0.240
NLRTDB	0.	0.	0.
NALTDLY	0.	0.	0.
NMPSIT	1	16	0
PDES	0.10000	0.	0.
PFPF	0.05000	0.10000	0.
PINC	0.90000	0.86000	0.
PLABT	0.08000	0.12000	0.
PRABT	0.	0.	0.
RANGE	6300.0	1500.0	8200.0
RANGED	0.	0.	3.0000
RANGER	0.	0.	9700.0
REL	0.790000	0.600000	0.900000
RNGMIN	0.	0.	0.
SIMLUN	5	1	1
SPDLO/CEPMIN	0.	0.	270.0
SPEED	12000.0	6000.0	485.0
TOFMIN	0.	0.	0.

HEADING	DESCRIPTION
(1)	Table name
(2)	Column number
(3)	TYPE of weapon system
(4)	Values of the named attributes as input for weapon systems. See appendix A of Users Manual I for a description of each attribute

Figure 22. Weapon Type Characteristics

(1) WEAPON GROUP DATA

(2)	GROUP	1	2
(3)		MM-III	POL-A2
(4)	GNWPNS	150	16
(5)	GNVEH	50	16
(6)	GLAT	46.0000	65.0000
(7)	GLONG	101.0000	355.0000
(8)	IREG	1	2
(9)	IALERT	1	1
(10)	GREFCODE	0	0
(11)	GYIELD	0.1000	1.0392
(12)	GSTART	1	1
(13)	GBASE	1	1
(14)	GPKNAV	0.	0.
(15)	GSBL	0.1	0.1
(16)	GREFTIME	0.	1.000000
(17)	ATTINC	1	1

HEADING	DESCRIPTION
(1)	Table name
(2)	Weapon group index number
(3)	Weapon type
(4)	Number of weapons in group
(5)	Number of vehicles in group
(6)	Latitude of centroid of weapon group
(7)	Longitude of centroid of weapon group
(8)	Index to command and control region in which group resides
(9)	Index to alert status: 1 = alert; 2 = nonalert
(10)	Index of refueling method (assigned for bombers); for missiles, payload index
(11)	Yield of warheads assigned to group* (megatons)
(12)	Starting index number for group + 10,000 x NOALERT
(13)	Number of bases assigned to weapon group

*For bomber groups, this is the basic yield of the gravity bombs. For ASM yields, see the ASM and Warhead tables. For missiles, this is the mean yield of the warheads.

Figure 23. Weapon Group Data Print (Part 1 of 2)

(14)	Single shot kill probability for a weapon against a naval target; a value greater than zero restricts weapon use to naval targets
(15)	Probability of destruction before launch
(16)	First launch time for the group
(17)	Attack increment

Figure 23. (Part 2 of 2)

(1) (2)

GROUP 16 TYPE B-52G

(3) CNTRYLOC	(4) INDEXNO	(5) LAT	(6) LONG	(7) PAYLOAD	(8) ISTART	(9) NPERBASE	(10) NAME
US	1624	39.10000	121.30000	B52GH2	1	12	BEALE
US	1625	29.00000	117.20000	B52GH2	1	8	MARCH
US	1626	38.50000	121.20000	B52GH2	1	10	MATHER

HEADING	DESCRIPTION
(1)	Group index number
(2)	Weapon type
(3)	Launch base country location
(4)	Launch base index number
(5)	Latitude of launch base
(6)	Longitude of launch base
(7)	Index to payload table
(8)	Starting sortie index number
(9)	Number of vehicles on base
(10)	Name of base

Figure 24. Weapon Group Launch Base Print Option

1	MODULE PLANSET CALLED WITH VERB EQUAL TO (012) PLANSET was called with incorrect verb, processing terminates.
2	MODULE PLANSET CALLED WITH NO INPUT PARAMETERS Check inputs, there are none.
3	MODULE PLANSET CANNOT DETERMINE ADVERB (012) Probably an input spelling error, recheck.
4	MODULE PLANSET: NO. OF CCREL PARAMETERS EXCEED MAX There are only 20 entries allowed for command and control reliabilities.
5	MODULE PLANSET: NO. OF SELECTED DESIGS EXCEEDS MAX There are only 200 entries allowed for alpha-portions of DESIG for complexing.
6	MODULE PLANSET: NO OF SELECTED TASKS EXCEEDS MAX There are only 48 entries allowed for TASK for complexing.
7	MODULE PLANSET: NO. OF SELECTED WEAPON SYSTEMS EXCEED MAX There are only 100 entries allowed for selected weapon systems.
8	NO MATCH FOR TASK AND DESIG PLANSET failed to find a new representative target using the TASK and PRIORITY inputs. Lead target will become representative; no action necessary.
9	CANNOT FIND WEAPON TYPE (A6) PLANSET could not find a user supplied type. Check ATTACKERS weapon clause spelling.
10	TANKER DATA BASE ERROR AT DESIG (A6) IREFUEL (I6) PLANSET encountered a tanker base with IREFUEL greater than -4 but less than 0. Processing continues, call maintenance programmer.
11	MORE THAN (I5) WEAPON GROUPS PLANSET formed the maximum number of weapon groups allowed and tried to form an additional one. Weapon site being processed at the time was ignored. Consult a maintenance programmer.

Figure 27. PLANSET Error Messages